



It *is* rocket science. That's the point.

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A **spinoff** is technology created by NASA that trickles down to our everyday use. From new roller coasters to cool guitars, spinoffs are a segment of NASA just as revolutionary as space exploration.



Stay connected socially with NASA.

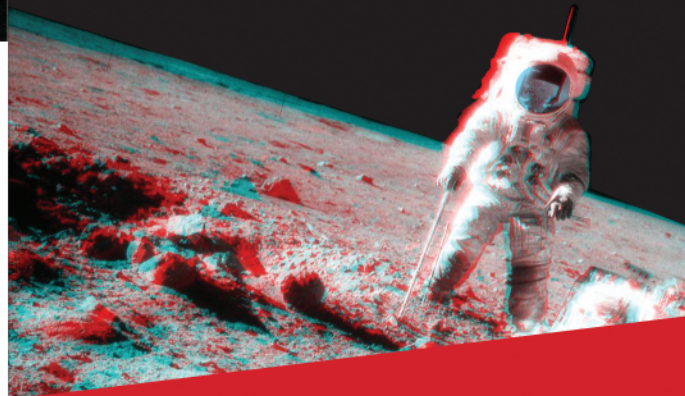


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National Aeronautics and
Space Administration



**NASA. Closer
than you think.**

TECH TRANSFER

Many people at NASA support the big picture of spinoffs and you can too!*

Prepare for Launch

OUT OF THIS WORLD TECHNOLOGY

NASA's focus is to pioneer in space exploration, scientific discovery, and aeronautics research. The pursuit of this research has led NASA to a pretty big thing called **spinoffs**.



To date, NASA has been issued more than 6,500 patents, and many have resulted in inventions that we use each day. Cool, huh?

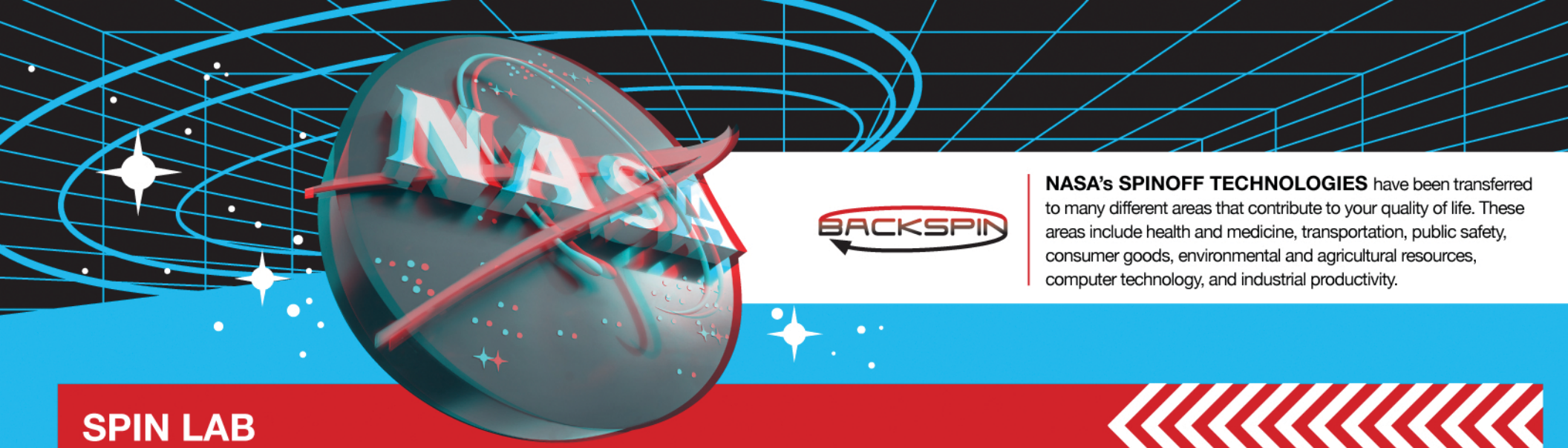


Let's get to the cool stuff! >>>>>>

This opens up to a full-size three-dimensional locker poster full of some amazing spinoff facts.

* Your courses in math and science can lead to a future at NASA, and help shape the future spinoffs of your generation. It's time for your generation to make its mark on humanity, as well as distant planets.





NASA's SPINOFF TECHNOLOGIES have been transferred to many different areas that contribute to your quality of life. These areas include health and medicine, transportation, public safety, consumer goods, environmental and agricultural resources, computer technology, and industrial productivity.

SPIN LAB

TECH TRANSFER

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1 ROCK ON

The highly successful Ovation® fiberglass guitar rocks with adapted NASA aerospace technology. An industrious helicopter manufacturer used special vibration analysis equipment to enhance the sound of acoustic guitars. The resulting instruments are stronger and less expensive to produce. Rock on!

2 WIND DOWN

Between 1974 and 1981, NASA Glenn led the U.S. Wind Energy Program for large wind horizontal-axis turbines—the predominant systems used today to convert wind energy into mechanical energy. The U.S. Department of Energy approved the design for worldwide certification of wind turbines.

3 TEST DRIVE

A computer program developed by NASA to analyze a spacecraft or airplane design is now used to help design everything from roller coasters to automobiles! This kind of software can save car makers a lot of money by showing them how well a design will work even before they build a prototype!

4 FOCUS

Image sensors developed by NASA researchers in the 1990s revolutionized the cell phone industry. Use of this small component was adopted by cell phone companies, and today one of every three cell phone cameras on the planet uses this sensor technology.

5 LOOK AHEAD

A harmful light-filtering lens was developed by NASA in the 1980s to provide eye protection during space missions. The special coating is now incorporated in more than 40 styles of commercially available sunglasses today.

6 BREAK THE ICE

An environmentally friendly anti-icing fluid invented by NASA keeps hazardous ice from building up on airplane wings, improving safety and saving time and money. The fluid is also available as a spray for automobile windshields, providing protection down to 20° F.

7 BRACE YOURSELF

Braces have used brackets that are made of a nearly invisible translucent (almost see-through) ceramic material. This material is a spinoff of NASA's advanced ceramic research to develop new, tough materials for space and aircraft.

8 CHILL OUT

NASA worked with several food companies to explore solutions to improve food quality for astronauts. One result was the freeze-drying process, which allows food to be stored for long periods without refrigeration, while retaining 98 percent of its nutritional value and only 20 percent of its original weight.

9 SHRED IT

A thin film of diamond-like carbon, applied with a NASA-developed process helps ball bearings, tools, and moving parts last 10 times longer. These ball bearings can be found in skateboards and baby strollers today.

10 KEEP COOL

NASA's research into temperature-controlling textiles for space suits led to the development of a fabric now incorporated in ski apparel, socks, bedding, and business suits, keeping wearers comfortable in a variety of settings.

11 SINK OR SWIM

NASA worked in conjunction with Speedo® testing dozens of fabrics to determine the optimal choice for a swimsuit. A total of 93 world records were broken by swimmers wearing the suit before it was banned because of cited unfair competitive advantage.

The greatest benefit offered from space exploration is the opportunity to learn about our abilities, strengths, and weaknesses. The lesson is that our consistent pursuit keeps our dreams alive for years to come.



BIG IDEAS
NEED BIG SPACES,

SO THINK
BIG



BREAK THE SOUND BARRIER!
LET THE RECORD SPIN...Listen to the song "N.A.S.A. Anthem" by the musical group N.A.S.A. online at spaceflightsystems.grc.nasa.gov/nasaanthem. This is the soundtrack to your future, a bright future, with NASA. :)